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EXAMINER	
SLAWSKI, BRIAN R	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/585,484	VAN DE WEIJER ET AL.	
	Examiner	Art Unit	
	BRIAN R. SLAWSKI	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 April 2011*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4,5,9-36 and 39-49* is/are pending in the application.

4a) Of the above claim(s) *12 and 22-36* is/are withdrawn from consideration.

5)☒ Claim(s) *39,40 and 46* is/are allowed.

6)☒ Claim(s) *1,2,4,5,9-11,13-15,17-21,41,42,45,47 and 49* is/are rejected.

7)☒ Claim(s) *16,43,44 and 48* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

METHOD FOR PRODUCING CONTAINER PARTS, CONTAINER PARTS, METHOD FOR PRODUCING A MULTILAYER FOIL, MULTILAYER FOIL

Detailed Action

1. Applicant's request for reconsideration in the reply filed April 29, 2011, is acknowledged. Claims 1, 9-11, and 13 were amended. Claim 8 was canceled. Claims 39-49 were added.

2. The text of those sections of Title 35, U.S. Code, not included in this action can be found in the Office action issued December 6, 2010.

Claim Rejections—35 USC §103

3. Claims 1, 2, 4, 5, 11, 13, 15, 17, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al. (US 4,868,033) in view of either one of Mast (US 6,501,059) or Fichtner (US 3,302,632).

Regarding claim 1, Nakano et al. teach a method of producing a self-supporting container part for food having electromagnetic shielding properties, such as the casing depicted in Fig. 18 having a compartment for receiving food and a microwave-radiation influencing material (i.e., metal) layer in the compartment's circumferential wall 22 (col. 1, LL. 7-11, LL. 51-57; col. 5, LL. 4-9). The method comprises the steps of providing a multilayer foil 10 comprising a metal foil or metallized (e.g., by sputtering) plastic film 3 and either one or two non-microwave-radiation-influencing films 2 of heat-shrinkable resin bonded to one or both sides of the metallic layer 3 (Fig. 1, 5-7; col. 1, LL. 58-62; col. 3, LL. 3-7, LL. 17-21, LL. 22-23, LL. 66-68). A remaining portion—layer 8/14 of

thermoplastic resin—of the container part is then bonded to one side of the multilayer foil 10 (Fig. 2; col. 4, LL. 41-47), by positioning the multilayer foil 10 inside a mold (e.g., between dies 11 and 12) and bonding the thermoplastic resin layer 8/14 to the multilayer foil 10 during forming of the container part (Fig. 15, 16; col. 4, LL. 62-68).

Nakano et al. do not explicitly state that the radiation-shielding food containers made by their method are for treatment in a microwave oven (col. 1, LL. 7-11, LL. 51-57), nor that the metallic layer 3 is provided with holes. However, it is well known in the art to form such food containers having a metallic layer sandwiched between non-radiation-influencing layers for the explicit purpose of cooking the food therein in a microwave oven, where the metal layer acts both to shield the food from direct microwave radiation and as a susceptor to absorb radiation and thereby heat the food by conduction. It is further well known to pattern the metallic layer of such containers with holes in order to adjust the amount of microwave radiation transmitted through the container, the amount reflected, and the amount absorbed and used to heat the container itself, in order to optimize the cooking process according to the particular food in the container, as evidenced by Mast (Abstract; Fig. 1a, 1b, 2, 3a, 3b, 6; col. 1, LL. 6-12; col. 2, LL. 59-67; col. 3, LL. 1-4; col. 4, LL. 62-67; col. 5, LL. 1-11; col. 6, LL. 20-49, LL. 66-67; col. 7, LL. 1-10, LL. 21-26) and Fichtner (Fig. 1, 2; col. 1, LL. 9-11, LL. 66-69; col. 2, LL. 6-34). Hence, it would have been obvious to one of ordinary skill in the art to use the food container made by the method of Nakano et al. for cooking in a microwave oven, and to provide holes in the metallic layer 3 of Nakano et al. in order to adjust the

cooking rate of the food in the container, in light of the teachings of either of Mast or Fichtner.

Nakano et al. do not show the individual layers of the multilayer foil 10 within the mold (Fig. 15), as the foil 10 depicted is intended to represent any of the various embodiments of the multilayer foil taught by Nakano et al. (col. 5, LL. 27-28). In the case of the multilayer foil having only one film 2 bonded to one side of the metallic layer 3, it would have been obvious to one of ordinary skill in the art to orient the multilayer foil 10 such that the metallic layer 3 is bonded to the thermoplastic resin layer 8/14 and the heat-shrinkable resin film 2 is present on a free surface of the container part, because it is conventional in the art to sandwich the metallic layer in such food containers between non-metal layers in order to protect the metal from corrosion and the food from contamination, as evidenced by Mast (Fig. 1b; col. 4, LL. 64-67; col. 5, LL. 1-5) and Fichtner (Fig. 2; col. 2, LL. 25-28).

Regarding claim 2, while Nakano et al. depict applying the thermoplastic resin layer 8/14 to the convex side of the molded container part (Fig. 15, 16), they teach no advantage to this configuration and note that the container part may be formed in any desired shape (col. 4, LL. 62-68) and that the thermoplastic resin layer 8/14 is intended to serve as a reinforcing layer, a sealant, and as a decorative layer (col. 4, LL. 45-47). Hence, it would have been obvious to one of ordinary skill in the art to bond the thermoplastic resin layer 8/14 in the alternative orientation on the concave side of the molded container part, such that the heat-shrinkable resin film 2 is present on the outer side of the container part, because this inversion of the container shape of Fig. 15 and

16 is allowed for by Nakano et al. and because the benefits of the thermoplastic resin layer 8/14 taught by Nakano et al. are equally applicable whether the layer 8/14 is applied on the outside or inside surface of the container part.

Regarding claim 4, Nakano et al. teach that the container parts can be formed by injection-molding the thermoplastic resin layer 8/14 in an injection mold (Fig. 15, 16; col. 2, LL. 7-10; col. 4, LL. 62-68).

Regarding claim 5, Nakano et al. teach that, alternatively, the container parts can be formed by thermoforming the container parts in a thermoforming mold (Fig. 19-21; col. 2, LL. 7-10; col. 5, LL. 4-22).

Regarding claim 11, Nakano et al. teach that the heat-shrinkable resin films 2 are closed layers (Fig. 1; col. 3, LL. 22-32).

Regarding claim 13, Mast, for instance, does not specifically show the production line(s) in which holes 14 are formed in Mast's metal foil 12 and the metal foil 12 and polymer barrier layer 11 are then bonded to a stiffening backing layer 13 corresponding to the reinforcing thermoplastic resin layer 8/14 of Nakano et al. (Fig. 1b, 2; col. 4, LL. 64-67; col. 5, LL. 1-11). However, it would have been obvious to one of ordinary skill in the art to perform these sequential steps in a single production line at a single manufacturing location in order to minimize handling and transport of the materials between process steps, and hence would have been obvious to form holes in the metal foil 3 of Nakano et al. in the same production line as that in which the multilayer foil 10 is later bonded to the thermoplastic resin layer 8/14 for the same reason.

Regarding claim 15, Nakano et al. teach that the multilayer foil 10 may be provided with non-microwave-radiation-influencing films 2 of heat-shrinkable resin on either side of the metal foil 3 (Fig. 6, 7; col. 1, LL. 58-62; col. 3, LL. 66-68).

Regarding claim 17, Nakano et al. teach that the heat-shrinkable resin film 2 and the thermoplastic resin layer 8/14 may be made of the same materials, including polyethylene, polypropylene, vinyl chloride, polystyrene, or polyester (e.g., polyethylene terephthalate) (Fig. 1, 8, 12; col. 3, LL. 3-11; col. 4, LL. 8-17, LL. 41-45, LL. 48-49).

Regarding claim 45, Nakano et al. teach bonding the metallic layer 3 to the non-microwave-radiation-influencing film 2 via a bonding layer 4 comprising an adhesive layer 6 and a synthetic resin layer 5 which also acts as an adhesive at normal temperature (Fig. 1, 3, 6; col. 3, LL. 3-7, LL. 22-33, LL. 36-46), or via direct hot bonding or ultrasonic bonding (col. 3, LL. 34-35). In any of these embodiments the layers 3 and 2 would be "directly bonded" as this term is used by Applicant, which allows for the use of adhesive between the layers (see paragraphs 0022, 0026, and 0087 in the instant specification).

4. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al. in view of either one of Mast or Fichtner as applied to claims 1, 2, 4, 5, 11, 13, 15, 17, and 45 above, and further in view of Brown (US 3,219,460).

Regarding both of claims 9 and 10, Nakano et al. do not specifically teach forming a food container having multiple compartments. However, it is well known in the art to provide such food containers with plural recessed compartments in order to

keep different foods in the container separated from each other, as evidenced by Mast (Fig. 6; col. 8, LL. 66-67; col. 9, LL. 1-13, LL. 21-26) and Fichtner (Fig. 1, 2; col. 2, LL. 6-11, LL. 19-22, LL. 39-44). It would have been obvious to one of ordinary skill in the art to provide such a plurality of molded compartments in the food container of Nakano et al. so that a variety of foods could be stored and prepared in the container without mixing with each other.

Furthermore, it is also well known in the art to provide apertured radiation-shielding metallic layers adjacent the compartments of a microwaveable food container, where the metallic layers' holes are uniquely configured for each compartment to transmit a different amount of microwave radiation, thus allowing foods with different thermal properties to be cooked simultaneously in a microwave oven. See, for instance, Mast (Fig. 6; col. 8, LL. 66-67; col. 9, LL. 1-21), Fichtner (Fig. 1, 2; col. 1, LL. 66-69; col. 2, LL. 39-53), and Brown (Fig. 3, 4; col. 1, LL. 11-13, LL. 47-58; col. 2, LL. 62-72; col. 3, LL. 1-7, LL. 70-75). It would have been obvious to one of ordinary skill in the art to apply the same principal to the metallic layer 3 of Nakano et al. in a food container with different foods in plural compartments, providing the metallic layer with different configurations of holes beneath each compartment in order to tailor the cooking rate of the different foods.

Regarding claim 9 in particular, Mast (Fig. 2, 3a, 3b; col. 5, LL. 8-11, LL. 52-64; col. 6, LL. 26-49) and Brown (Fig. 4; col. 2, LL. 69-72; col. 3, LL. 1-5) teach that providing different shapes and patterns of holes in the metal layers adjacent each compartment of a food container can give the metal layers different unshielded areas

and resistances to microwave-induced currents in each compartment. Regarding claim 10 in particular, Fichtner (Fig. 1, 2; col. 1, LL. 66-69; col. 2, LL. 39-53) and Brown (Fig. 4; col. 1, LL. 53-57; col. 2, LL. 69-72; col. 3, LL. 1-5) teach that using different sizes of holes in the different compartments' metal layers yields the same ability to adjust the cooking rates of the foods therein. Hence, it would have been obvious to one of ordinary skill in the art to provide different patterns and/or sizes of holes in the metallic layer 3 of Nakano et al. to allow different cooking rates of foods in a plural-compartment container.

5. Claims 14 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al. and either one of Mast or Fichtner as applied to claims 1, 2, 4, 5, 11, 13, 15, 17, and 45 above, and further in view of either one of Lafferty et al. (US 6,102,281) or Mast (US 2004/0238535; "Mast '535").

Regarding claim 14, Nakano et al. do not specifically show the shape of the multilayer foil 10 before forming the flat multilayer foil into a dish-shaped container part (e.g., Fig. 18). However, it is known in the art to form such dish-shaped microwaveable food containers from flat multilayer foils comprising metal and nonmetal layers by cutting the multilayer foil to have flaps to be folded into the container's sidewalls, where the flaps have cut-out corner portions to prevent excess overlapping of material (especially of the metal, which may produce uneven heating in overlapped regions), as evidenced by Lafferty et al. (Fig. 1-3; col. 1, LL. 5-6, LL. 65-67; col. 2, LL. 1-6, LL. 43-48, LL. 52-55, LL. 64-67; col. 3, LL. 12-16) and Mast '535 (Fig. 5, 6; [0002, 0008, 0047-

0049]). It would have been obvious to one of ordinary skill in the art to cut the multilayer foil 10 of Nakano et al. into a similar shape with cut-out corner portions before folding it into the container part in a mold, in order to facilitate the folding and prevent excess overlapping of the multilayer foil (and consequent uneven heating during microwaving) in the shaped container part.

Regarding claim 49, while Nakano et al. do not explicitly teach that the multilayer foil 10 substantially conforms to the shape of the mold before it is placed therein, it would have been obvious to one of ordinary skill in the art to fold the multilayer foil 10 having cut-out corner portions as taught by Lafferty et al. and Mast '535 into the approximate shape of the container before placing the foil 10 in the mold, in order to ensure that the sidewall-forming flaps fold correctly and to center and seat the foil 10 on the convex lower die 12 of Nakano et al. (Fig. 15; col. 4, LL. 62-65).

6. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al. and either one of Mast or Fichtner as applied to claims 1, 2, 4, 5, 11, 13, 15, 17, and 45 above, and further in view of Minerich et al. (US 5,593,610).

Regarding claim 18, Nakano et al. do not specifically teach covering their food container with an additional multilayer foil after filling the container with food. However, it is well known in the art to cover and seal such dish-shaped food containers with another multilayer film having a radiation-influencing material layer, in order to extend the shelf life of the food therein and provide additional control over the amount of radiation the food receives from above, as evidenced by Minerich et al. (Fig. 2, 2A, 2B,

4; col. 2, LL. 3-6, LL. 20-36, LL. 50-55; col. 3, LL. 19-22, LL. 37-42, LL. 58-60). Minerich et al. teach a microwaveable food container 20 having a lid 10 made of a multilayer foil, the multilayer foil comprising a microwave-transparent film 12 and a microwave-radiation-influencing metal layer 16, 17 bonded on the side thereof remote from the container's interior (Fig. 2, 2A, 2B; col. 5, LL. 34-38, LL. 45-54). It would have been obvious to one of ordinary skill in the art to apply the multilayer foil lid of Minerich et al. onto the food container of Nakano et al. after filling the container with food, in order to better preserve the food and control its exposure to overhead radiation.

Regarding claim 19, Minerich et al. teach directly bonding the lower microwave-transparent film 12 of their multilayer foil lid 10 to the upper circumferential flange 28 of the filled food container 20 (Fig. 2; col. 3, LL. 28-31; col. 5, LL. 34-36, LL. 51-54), so that it would have been obvious to one of ordinary skill in the art to likewise directly bond the multilayer foil lid of Minerich et al. to the upper circumferential flange 23 of the food container of Nakano et al. (Fig. 18; col. 5, LL. 4-7).

7. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al., either one of Mast or Fichtner, and Minerich et al. as applied to claims 18 and 19 above, and further in view of Middleton et al. (WO 03/078012).

Minerich et al. do not specifically teach the alternative of bonding their multilayer foil lid 10 to the flange 28 of the food container 20 via a separate sealing foil. However, Middleton et al. also teach a microwaveable food tray 100 made of a multilayer foil comprising a metal layer and nonmetal layers and having an upper circumferential

flange 116 designed to mate with a lid or sealing film (Fig. 1A; [0119, 0121-0123]). Middleton et al. teach that when the tray is press-formed the flange 116 can develop surface pleats 122 that may interfere with the sealing of the lid or sealing film, and that therefore the upper surface 128 of the flange 116 can be encapsulated with a smooth plastic layer (i.e., a separate sealing foil directly bonded to the flange), to which a sealing film can then be glued hermetically (Fig. 1A, 1B, 3, 4; [0125-0126, 0129-0131]). Hence, it would have been obvious to one of ordinary skill in the art to use such a separate sealing foil between the multilayer foil lid 10 of Minerich et al. and the flange 23 of the container taught by Nakano et al., in order to provide a smooth sealing surface despite any irregularities in the surface of the flange 23 resulting from the container's shaping.

8. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al. in view of either one of Mast or Fichtner as applied to claims 1, 2, 4, 5, 11, 13, 15, 17, and 45 above, and further in view of Tilton (US 2009/0047525). (Note that Tilton is cited to evidence an intrinsic material property, and thus need not antedate Applicant's foreign priority.)

Nakano et al. teach that the heat-shrinkable resin film 2 of the multilayer foil 10 can be any of various conventional polymers, including polyethylene, polypropylene, vinyl chloride, polystyrene, or polyester (col. 3, LL. 3-11). While Nakano et al. do not explicitly describe these nonconductive polymer films as being electrostatically chargeable, Tilton teaches that all electrically insulating materials are capable of holding

a static charge [0011], such that the resin film 2 made of the materials taught by Nakano et al., and thus the multilayer foil 10, would inherently be electrostatically chargeable.

9. Claims 41 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al. in view of either one of Mast or Fichtner, and Tilton.

Regarding claim 41, Nakano et al. teach a method of producing a self-supporting container part for food having electromagnetic shielding properties, such as the casing depicted in Fig. 18 having a compartment for receiving food and a microwave-radiation influencing material (i.e., metal) layer in the compartment's circumferential wall 22 (col. 1, LL. 7-11, LL. 51-57; col. 5, LL. 4-9). The method comprises the steps of providing a multilayer foil 10 comprising a metal foil or metallized (e.g., by sputtering) plastic film 3 and either one or two non-microwave-radiation-influencing films 2 of heat-shrinkable resin bonded to one or both sides of the metallic layer 3 (Fig. 1, 5-7; col. 1, LL. 58-62; col. 3, LL. 3-7, LL. 17-21, LL. 22-23, LL. 66-68). A remaining portion—layer 8/14 of thermoplastic resin—of the container part is then bonded to one side of the multilayer foil 10 (Fig. 2; col. 4, LL. 41-47), by positioning the multilayer foil 10 inside a mold (e.g., between dies 11 and 12) and bonding the thermoplastic resin layer 8/14 to the multilayer foil 10 during forming of the container part (Fig. 15, 16; col. 4, LL. 62-68).

Nakano et al. do not explicitly state that the radiation-shielding food containers made by their method are for treatment in a microwave oven (col. 1, LL. 7-11, LL. 51-57), nor that the metallic layer 3 is provided with holes. However, it is well known in the art to form such food containers having a metallic layer sandwiched between non-

radiation-influencing layers for the explicit purpose of cooking the food therein in a microwave oven, where the metal layer acts both to shield the food from direct microwave radiation and as a susceptor to absorb radiation and thereby heat the food by conduction, as evidenced by Mast (Abstract; Fig. 1a, 1b, 6; col. 1, LL. 6-12; col. 2, LL. 59-67; col. 3, LL. 1-4; col. 4, LL. 62-67; col. 5, LL. 1-5; col. 6, LL. 66-67; col. 7, LL. 1-10, LL. 21-26) and Fichtner (Fig. 1, 2; col. 1, LL. 9-11, LL. 66-69; col. 2, LL. 6-34). Hence, it would have been obvious to one of ordinary skill in the art to use the food container made by the method of Nakano et al. for cooking in a microwave oven in light of the teachings of either of Mast or Fichtner.

Nakano et al. teach that the heat-shrinkable resin film 2 of the multilayer foil 10 can be any of various conventional polymers, including polyethylene, polypropylene, vinyl chloride, polystyrene, or polyester (col. 3, LL. 3-11). While Nakano et al. do not explicitly describe these nonconductive polymer films as being electrostatically chargeable, Tilton teaches that all electrically insulating materials are capable of holding a static charge [0011], such that the resin film 2 made of the materials taught by Nakano et al., and thus the multilayer foil 10, would inherently be electrostatically chargeable.

Regarding claim 47, Nakano et al. teach bonding the metallic layer 3 to the non-microwave-radiation-influencing film 2 via a bonding layer 4 comprising an adhesive layer 6 and a synthetic resin layer 5 which also acts as an adhesive at normal temperature (Fig. 1, 3, 6; col. 3, LL. 3-7, LL. 22-33, LL. 36-46), or via direct hot bonding or ultrasonic bonding (col. 3, LL. 34-35). In any of these embodiments the layers 3 and 2 would be “directly bonded” as this term is used by Applicant, which allows for the use

of adhesive between the layers (see paragraphs 0022, 0026, and 0087 in the instant specification).

10. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al., either one of Mast or Fichtner, and Tilton as applied to claims 41 and 47 above, and further in view of either one of Lafferty et al. or Mast '535.

Nakano et al. do not explicitly teach that the multilayer foil 10 substantially conforms to the shape of the mold before it is placed therein and made into a dish-shaped container part (e.g., Fig. 18). However, it is known in the art to form such dish-shaped microwaveable food containers from flat multilayer foils comprising metal and nonmetal layers by cutting the multilayer foil to have flaps to be folded into the container's sidewalls, where the flaps have cut-out corner portions to prevent excess overlapping of material (especially of the metal, which may produce uneven heating in overlapped regions), as evidenced by Lafferty et al. (Fig. 1-3; col. 1, LL. 5-6, LL. 65-67; col. 2, LL. 1-6, LL. 43-48, LL. 52-55, LL. 64-67; col. 3, LL. 12-16) and Mast '535 (Fig. 5, 6; [0002, 0008, 0047-0049]). It would have been obvious to one of ordinary skill in the art to cut the multilayer foil 10 of Nakano et al. into a similar shape, and then fold it into the approximate three-dimensional shape of the container before placing the foil 10 in the mold, in order to ensure that the sidewall-forming flaps fold correctly and to center and seat the foil 10 on the convex lower die 12 of Nakano et al. (Fig. 15; col. 4, LL. 62-65).

Allowable Subject Matter

11. Claims 16, 43, 44, and 48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 16 would be allowable because, while Nakano et al. teach that non-microwave-radiation-influencing heat-shrinkable resin films 2 may be bonded to both sides of the metal foil 3 in the multilayer foil 10 (Fig. 6; col. 3, LL. 66-68), they do not teach doing so only to then detach one of the heat-shrinkable resin films 2 before bonding the multilayer foil 10 to the remaining portion (thermoplastic resin layer 8/14) of the container part. Claims 43, 44, and 48 would be allowable because Nakano et al. do not specifically teach providing holes through the outer layer of their multilayer foil 10, nor does the prior art elsewhere suggest a motivation to provide such holes in the outer layer of a multilayer microwaveable food container.

Claims 39, 40, and 46 are found allowable for incorporating the allowable subject matter of claim 16, as described above.

Response to Arguments

12. Applicant's arguments filed April 29, 2011, have been fully considered. With respect to the claim rejections in the Office action issued December 6, 2010, Applicant's arguments are not persuasive. Applicant argues that Nakano et al. teach away from vacant spaces within the laminate 10 in that, if the metallic foil 3 of Nakano et al. were to include holes, during the laminate's heat shrinking step the adhesive resin material of

layers 5 would become fluid and escape via any holes in the metallic foil 3. However, Nakano et al. teach that heat-shrinkable resin films 2 may be bonded to both sides of the metallic foil 3 via bonding layers 4 (Fig. 6; col. 3, LL. 66-68), and also that the layers may be bonded by hot bonding or ultrasonic bonding instead of by adhesive (col. 3, LL. 34-35). In none of these embodiments would the scenario presented by Applicant have been a danger. Applicant also argues that any holes provided in the metallic foil 3 would not be well defined after the heat-shrinking step and stretching during injection molding. The examiner is not convinced of this assertion: holes in the metallic foil 3 may change in size somewhat as a result of these steps, but they would not likely become poorly defined and would still be able to perform the function taught by Mast '059 and Fichtner.

Applicant argues that this function (i.e., radiation-absorbing susceptor to heat the food indirectly) of the perforated metallic layers in the food containers taught by Mast '059 and Fichtner is contrary to the function (i.e., electromagnetic shielding) of the metallic layer in the food container taught by Nakano et al. This is not found convincing because, in practice, perforated metallic layers in food containers like those taught by Mast '059 and Fichtner are well known in the art to perform the combined functions of partial radiation shielding, partial radiation transmission, and susceptor to heat the food by conduction. These functions are complementary and their balance can be adjusted by changing the geometry of the metallic layer according to the optimal cooking treatment of the container's particular food, as evidenced by Mast '059 (Fig. 2, 3a, 3b; col. 5, LL. 8-11, LL. 52-64; col. 6, LL. 26-49), Brown (Fig. 4; col. 1, LL. 53-57; col. 2, LL.

69-72; col. 3, LL. 1-5), and Fichtner (Fig. 1, 2; col. 1, LL. 66-69; col. 2, LL. 39-53). Hence, one of ordinary skill in the art would have recognized that providing holes in the metallic layer 3 of Nakano et al. would not destroy its radiation shielding effect but rather modify it as appropriate to the food being cooked.

Applicant notes that Mast ‘059 teaches a metallic layer in the form of a vapor-deposited metal film on a polymer substrate (Mast ‘059 col. 5, LL. 17-23), in contrast to the metal foil 3 taught by Nakano et al., and argues that one of ordinary skill in the art therefore would not consider combining the teachings of Mast ‘059 with those of Nakano et al. This is not found convincing because Nakano et al. also teach that instead of a metal foil, metallic layer 3 may be a plastic film having one or both sides metallized by vacuum evaporation or sputtering (col. 3, LL. 17-21).

Applicant argues that the grid of metal wires taught by Fichtner would be susceptible to sparking in a microwave environment and would produce vacant spaces in the laminate of Nakano et al. However, Fichtner is cited not to suggest replacing the metallic layer 3 of Nakano et al. with a wire grid, but rather as teaching the principle that providing holes in the metallic layer of a microwaveable food container is a known technique for modifying the metallic layer’s response to microwave radiation and thus the cooking properties of the container.

With respect to new claims 39, 40, and 46, the examiner has indicated allowable subject matter.

With respect to original claim 21 and new claim 41, Applicant argues that Tilton's teaching that “all electrically insulating materials are capable of holding a static charge”

suggests only "the capability to have" this characteristic, not that this characteristic must exist. The examiner disagrees: Tilton teaches straightforwardly that all electrical insulators can be electrostatically charged, not that they may or may not have this property. Hence, the insulating heat-shrinkable resin films 2 taught by Nakano et al. are electrostatically chargeable.

With respect to new claims 40, 42, and 49, Applicant argues that the laminate 10 of Nakano et al. has at most very limited flexibility and thus cannot be pre-shaped to the shape of the mold in Fig. 16. The examiner is not aware of any teaching of Nakano et al. to this effect. In col. 2, LL. 31-34, Nakano et al. teach "The heat-shrunk laminate having a layer of thermoplastic synthetic resin on one or both of its sides will have a better flexibility or ductility. Thus, better formings can be obtained."

With respect to new claims 43 and 44, the examiner has indicated allowable subject matter.

With respect to new claims 45 and 47, Applicant argues that Nakano et al. do not suggest directly bonding the metallic layer to the non-microwave-radiation-influencing layer. This is not found convincing because, as Applicant notes, the instant specification defines direct bonding to allow for the use of adhesive between the layers, and because Nakano et al. teach bonding the metallic layer 3 to the non-microwave-radiation-influencing film 2 via only adhesive layers 5 and 6 (Fig. 1, 3, 6; col. 3, LL. 3-7, LL. 22-33, LL. 36-46), or via direct hot bonding or ultrasonic bonding (col. 3, LL. 34-35).

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRIAN R. SLAWSKI whose telephone number is (571)270-3855. The examiner can normally be reached on Monday to Thursday, 7:30 a.m. to 5:00 p.m. ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Philip Tucker, can be reached on (571) 272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRIAN R SLAWSKI/
Examiner, Art Unit 1745

B.R.S.

/Philip C Tucker/
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